THE WESTERN FARMER AND GARDENER,
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Amaryllis Formosissima.

For a description and the mode of cultivation of the Amaryllis Formosissima, see page 139.

The Dana Apple.

This apple, imperfectly and incorrectly described in our last number, is a good addition to the small list of apples that ripen in its season; it ripens in July. The fruit is of medium size, handsomely shaped—nearly round; fair and smooth skin, striped with light red. The flesh is tender and juicy, with a very pleasant flavor. It is said to have originated in Michigan. It is not yet extensively in cultivation here, and ranks among the *new* apples.

Agricultural Zeal in Hamilton County.

We had the great satisfaction of attending a meeting of the Executive Board o the Hamilton County Agricultural Society, at Cummingsville, on the 21st of December, ultimo, where the most zealous manifestations of feeling, both in the members present and in the farmers assembled to hear a lecture on manures by Chas. Whittlesey, Esq., recently appointed the Professor of Geology and Chemistry, were exhibited towards forwarding, by all practicable means, the great work of agricultural advancement in the County and State. There were two important resolutions passed unanimously,—one of them was, to petition the Legislature of Ohio to institute a State Board or Bureau of Agriculture, on economical principles; the encouragement of County Societies to communicate with and report to the Central Board, and a cheap and uniform system of County Surveys and Premiums, &c. &c. The other resolution was, that a committee be appointed to take steps to procure a piece of land by subscription, to be cultivated as a Model Farm, in Hamilton county. One of the best friends of agricultural improvement present, set a liberal example to the rest of the farmers of the county, by putting his name down for a good round sum, which was immediately followed up by other friends of the cause, till the list presented a very respectable aspect in regard to money to be advanced for this admirable purpose. The lecture delivered by Mr. Whittlesey was on a subject of the very highest value to the farmers of this region, now beginning to suffer materially from a system of exhausting cropping. The lecturer, in a very clear, forcible, and learned manner, pointed out the causes and effects of this continual impoverishment of the soil by repeated cropping, without an adequate return for the vegetable food consumed by the growing plants; and proceeded to point out, on scientific chemical principles, the proper and most economical remedies to be applied to supply or resuscitate the exhausted ingredients necessary for vegetable life and luxuriance. The greater part of the system and modern views which the latest lights have shed on agricultural chemistry, were ably and eloquently enforced by the lecturer, in the most plain and happy manner. The Board concluded their labors, by preparing a number of resolutions relating to the premiums to be awarded to the best farms, crops, stock, and agricultural and domestic produce generally, for the ensuing year, which, although it took them to a late hour to settle, did not appear in any way to dampen the zeal and ardor with which their minds were possessed in these all-important, most useful, and noble interests of the country. We had almost omitted to mention the high gratification that was afforded us by the Board passing a unanimous resolution that the *Western Farmer* be considered the *organ* of the Society, and that each member be requested to exert himself to promote the circulation of the paper, knowing that means of this kind is one of the most powerful to promote a perpetually increasing knowledge among the agricultural profession.

E. J. H.

The Grape Vine.

We published an extract from a new work by A. J. Downing, not yet issued, a short time since, expecting at the time to have continued it from the work; so soon as we receive it, it will be completed. Landscape Gardening and Cottage Residences, by this writer, will shortly be for sale here, and we shall give a more extended notice. The work on Fruits, we hope, will make its appearance before the spring.

Plaister.—Sow one bushel per acre on wheat in April.

Spirit of the Agricutural Journals.

Product from Manure.—Experiments in Germany have led to the following conclusions:—if a given quantity of land, without any manure, yields three times the seed employed, then the same quantity of land will produce five times the quantity sown, when manured with old herbage, putrid grass or leaves, garden stuffs, &c.—seven times when manured with cow dung—nine times with pigeon's dung—ten times with horse dung—twelve times with goat's and sheep's dung—fourteen times with human manure or bullock's blood. +

Locust Trees.—When locust trees are felled in winter while the circulation of the sap is suspended, and the parts are allowed to become perfectly dry before they are set, they are estimated to last 40 years.

Turnip Fly.—L. B. Parsons, says the New Genesee Farmer, soaks his ruta baga seed in tanner's oil; and then rolls it in plaster. The odor keeps away the insects. A small quantity of oil answers the purpose.

A Hint.—Dont suffer your revolving hay rake, and your wagon rack, and hand rakes, and whatever else you have used in haying or harvesting, or indeed tools or implements you have used in any other work, to lie out in the fields exposed to the weather, but see them well housed for another season. The weather destroys more tools than hand work, with some farmers; and more valuable time is lost hunting up and repairing lost implements, than their original cost.—*Albany Cultivator.*

Nutriment in Potatoes.—As to the quantity of nourishment, as human food, contained in the potato, as compared with some other ordinary articles of food, the experiment of M. M. Berry and Herring, give the following result: "One hundred pounds of potatoes are equal for nutriment, to meat without bone, 25: beans, 28; wheaten bread, 35; parsnips and carrots, 190; turnips, 300; cabbage, 400. ‡ The experiment of M. M. Berry and Herring establish the fact that 3 pounds of potatoes are equal for nourishment to 12 ounces of bread, and 5 ounces of meat.

Subsoil Ploughing.—Its efficacy in actually improving the character and depth of soils, where proper tillage has been mantained, has been abundantly proved, and perhaps nowhere more signally than in resuscitation of worn out lands, exhausted by any particular crop, as by tobacco culture in Virginia. I speak from my own observation of its wonderful utility in a neighboring county—Fairfax—and have the corroborating testimony of the distinguished Judge of that circuit, who declared sometime since, that Fairfax, from being proverbially one of the poorest, was fast becoming one of the most fertile counties of Virginia; and this change has been wrought by the immigration of Northern farmers, bringing with them all their agricultural enterprise and knowledge of what may be properly called the mechanics of agriculture.—*N. Y. Farmer & Mechanic.*

The west generally is becoming greatly indebted to the improving and educated class of farmers who have come from the east and from Europe, and who are sensible of the *cheapness* of first-rate implements, and the *dearness* of all make shift articles of the kind. Were it not for this class of persons, and the intelligent and literary people who take up farming from our cities, and those who, living in towns, both read and encourage agricultural literature, the publishing of agricultural works and papers, recording our improvements, would be far more unprofitable than it is, and that is unrewarding enough, heaven knows.—Ed. What about the other place

American Fruits.—The demand in England for American fruit is likely to become a matter of considerable importance. A large quantity of apples were sent there last season, and paid well. Many orchards of five, ten, and twenty thousand trees have lately been planted in the Hudson River Counties, with a view of growing apples for export to foreign countries. We see no reason why peaches from New Jersey and other Atlantic regions where they will grow, cannot be sent to England by the steamers, and arrive in good condition.

Buckwheat Cakes.—As this is the season for buckwheat cakes, the following recipe will at this time be valuable to those who are fond of them; a friend, who has tried the experiment, says it makes decidedly better cakes, with half the trouble necessary in the usual mode of raising them' with yeast: To three pints of buckwheat flour, mixed into batter, add one teaspoonful of carbonate of soda, dissolved in water; add one ditto of tartaric acid dissolved in like manner; first apply the carbonate, stir the batter well, and then put in the acid; thus the use of yeast is entirely superseded, and cakes "as light as a feather" are insured. One great advantage is, that the batter is ready for baking as soon as it is made.

Corn Cobs.—The most economical method of disposing of corn cobs, is doubtless to pound them up and grind them with corn for stock. But as this is often neglected, another excellent mode of disposal is to soak them in pickle and feed them to cows or other cattle in the yard. A large tub, formed by sawing a hogshead in two, near the middle, should be placed in a convenient place, near the yard, and being filled with cobs, a sufficiency of warm water, strongly impregnated with common salt, should be

+ how apportioned - by weight or measure?
‡ Wrong - sure.

poured over them to render them soft and palatable to the stock.

Most animals devour them greedily in this state, but when it is not too much trouble, grinding into meal is much preferable. There is but little difference in the value of pure corn meal, and that made of corn and cobs, for feeding most animals; the meal of the cob also makes excellent puddings.—*Maine Cultivator.*

Silk Culture.—The second annual convention of silk culturists and manufacturers was held in New York last fall. It was stated that in a little town in the West, called Glovesville, gloves of the value of from $300,000 to $500-000 were annually made, and this manufacture at that place consumed in the same period $10-000 worth of American silk. The same quantity of Italian silk was formerly used. A communication from Myndert Van Schaich was received, enclosing $1,000 to be distributed at $100 a year, for the best piece of manufactured silk. The communication spoke of the writer's conviction that in a short time the silk manufacture of this country would raise to $20,000,-000 annually, and alluded to the acknowledged fact, that American silk was superior and made less waste in reeling from the cocoon than any other. The facts were admitted by persons perfectly conversant with silk culture.

Utility of Geese to the Farmer.—It has been long remarked that cattle of all kinds are never unhealthy where geese are kept in any quantity; and the reason assigned is simply this, that geese consume with complete impunity, certain noxious weeds and grasses, which taint more or less, according to their abundance, the finest paddocks pastured by horses, bullocks and sheep. Most farmers are aware of this, and in many places where the beeves appear sickly, geese are let into the pastures, and the soil where they tread is converted for the time being into a sort of infirmary.—*New Farmer's Journal.*

Corn Cobs again.—The following experiment proves the value of corn cobs:—"A farmer in Virginia, a few years ago, afraid that his corn crop would not be sufficient to last through the winter, determined to try, and actually succeeded in wintering his horses on corn cobs alone, pounded in a homminy mortar. They received no other substance except hay fodder. Upon this they did their winter's work, and were in good condition."

Rats.—If they are troublesome, sprinkle unslaked lime in their holes and about where they congregate, and they will depart without fail. This is more simple than a trap.

Molasses Posset.—Put in a saucepan a pint of sugar-house molasses, a tea-spoonful of powdered ginger, and a quarter of a pound of fresh butter. Simmer it over hot coals for half an hour, stirring it frequently, Then stir into it the juice of two lemons, two tea spoonsfull of brown sugar; boil the whole for five minutes longer. This is an excellent preparation to relieve colds, and is also particularly serviceable to persons subject to constipation.

Apple Bread—A Frenchman has invented and practiced with great success, a method of making bread with common apples, very far superior to potato bread.

After having boiled one third of peeled apples, he bruised them quite warm into two thirds of flour, including the proper quantity of yeast, and kneaded the whole without water, the fruit being quite sufficient. When the mixture had acquired the consistency of paste, he put it into a vessel in which he allowed it to raise for twelve hours. By this process he obtained very excellent bread, full of eyes, and extremely palatable and light.

Method of Curing Obstinate Horses.—A few days ago, as a carter was proceeding in the York road, near Doncaster, with a load of stones, his horse made a sudden stop, and refused, even after an unmerciful whipping, to proceed. A gentleman told the infuriated carter he must not beat him any more. "What shall I do?" said the man, "my horse has stood here upwards of an hour: shall I stand here all day?" "Oh no; the horse must go, but you must not beat him any more. Get me a rope twice as long as the horse." The rope was obtained, secured to the horse's tail, and then passed between the legs forward, after which a slight pull was given. The animal was frightened, and showed strong symptoms of kicking, but the pulling was continued. Suddenly he started forward, and went off without any more beating. The gentleman said he had seen the same method tried, with a similar effect, on the most refractory asses ever bred. If this fact is disputed by those who have obstinate horses or asses, let them try the experiment.

Diseased Potatoes.—Mr. H. M. Paine, of the optical works at Oxford, Mass., has applied a glass that magnifies 9000 times to the diseased parts of the potatoes, and finds them filled with animalculæ with bodies like the soldier-ant, and legs like the hairy garden spider. He thinks there is no epidemic amongst potatoes, but that the disease is *caused* by these insects.

Mildew on Gooseberries.—It is said that sprinkling fine salt around the bushes will have the effect of preventing the mildew, which is the greatest difficulty with which Gooseberry growers have to contend. The bushes should however be trained high to one stem, and kept well hoed and manured.

Alpaca Wool.—More than *two millions* pounds of wool of this beautiful animal were imported into Great Britain in the year 1843, from Western South America. This fact alone shows the great importance of the animal, and the propriety of efforts to acclimate it in this country. Enlightened and patriotic individuals in England have expended considerable sums for this purpose, with the brightest prospects of success.

Soiling.—Last year the cows here ran upon very good pasture, and averaged eight quarts of milk only per day. This year, by keeping the same lot up in the yard and soiling them with green food, they have averaged thus far within a fraction of sixteen quarts per day; thus showing that by being driven to and from pasture, walking about in search of food, and the disturbance of flies, animals will not secrete as much milk as when kept up quietly with plenty of food, where they can have shade or sunshine as they please. A certain degree of exercise is doubtless necessary for health; but an undue amount is prejudicial to fatting of the animal or secreting milk. More manure is made for the farm, when cattle are kept up and soiled, than when left out to run upon pasture.

Cooking Beets.—Having washed them free of dirt, *roast* them in the fire as you do potatoes. When cooked, peel and serve up in the usual manner. It is a dish fit for the stomach of the most fastidious epicure—at least, so says one who has tried it.—*Maine Cultivator.*

A person lately opened a toad in a wheat field, and found sixteen fresh beetles in its stomach, which the patient animal had probably snapped up while they attempted to cross the path. Toads are often kept with advantage on hot-beds for killing insects, and are among the gardener's best friends.

Sugar from Watermelons.—Uriah Johnson, a citizen of Carolina, says he has extracted from watermelons a syrup equal to molasses, which would produce sugar of good quality. The syrup is obtained by boiling the juice three hours in a common iron pot, eight gallons making one gallon of excellent syrup. He thinks one acre of common sand hill land would produce watermelons enough to make two hundred gollons of syrup equal to the best molasses. The refuse of the melons makes capital food for hogs, and thus nothing is lost.

Guano.—Justus Leibig says that the importation of one hundred weight of guano is equal to the importation of eight hundred weight of wheat—so astonishingly fertile is this manure. This is encouraging to the ten millions of oatmeal livers of Great Britain, as immense quantities of it are now coming from Africa. A late British paper thus sums up the prospect of the guano trade:—"As guano is likely to come into general use as an available and profitable manure, an idea may be formed of the quantity required. There are, for instance, in England and Wales twenty-five millions of acres of land under cultivation, and almost sixteen millions in Ireland and Scotland. Supposing, however, that guano be applied ultimately to only one-twelfth of this quantity, what a trade would thus be created! Taking it for granted that an acre would require about two and a half hundred weight, six hundred thousand tons annually would be required, while the import of this quantity would employ some twelve hundred vessels of five hundred tons burthen each!"

Hoarseness.—One drachm of freshly scraped horse radish root, to be infused with four ounces of water in a close vessel for two hours, and made into a syrup, with double its weight in vinegar, is an improved remedy for hoarseness; a tea spoonful has often proved effectual; a few tea spoonsful, it is said, have never been known to fail in removing hoarseness.

Fence Posts.—A practical farmer informs the Hartford Times, that in taking up a fence that had been set fourteen years, he noticed that some of the posts remained nearly sound, while others rotted off at the bottom. On looking for the cause, he found that those posts which were set limb part down, or inverted from the way they grew, were sound: those that were set as they grew were rotted off.—This fact is worthy the attention of farmers.

Films.—Perhaps all readers do not know the easiest as well as the most effectual remedy for removing a film from the eye of an animal. It is simply to apply a teaspoonful of molasses on the eyeball. I have relieved oxen, horses, cows, and sheep, in this manner, and know of no other remedy equal to it.—*Clenburn.*

Fermentation in Manure Heaps.—When a piece of paper, moistened with the spirit of salt, or muriatic acid, held over the steam arising from a dunghill, gives dense fumes, it is a certain test that decomposition is going too far; for this indicates that ammonia is not only formed, but is escaping.—*Smith's Farming.*

Cornstalk Sugar.—Mr. John Beal, of New Harmony, Indiana, has made three hundred and ninety-five pounds of good sugar this season, from the cornstalks that grew on three quarters of an acre. This is at the rate of five hundred pounds per acre. His plan is thus briefly noticed in the Cleveland Herald:—"When the ears begin to form they are pulled off. When the leaves are dead, about half way up the stalk is stripped of leaves, cut up at the root, the top cut off, and then ground in a sugar mill. Twenty stalks will yield about one pound of sugar. Mr. Beal made eighty pounds in a day, with a simple apparatus of his own construction. Five hundred pounds, at four

cents per pound, is twenty dollars per acre. It would have produced, say fifty bushels of corn, at twenty-five cents, or twelve dollars."

Yellow Corn commands about four cents a bushel more than white corn, in the New York and Boston markets. A considerable quantity of corn is now shipped from New Orleans to the Eastern cities; and this advantage of yellow corn should be noted by those who grow corn for the New Orleans market, where it is purchased for the Eastern markets. Mr. Barbour has set up an establishment for grinding and drying meal for export, and he finds that a decided preference is given to the meal of yellow corn. In the Middle, Western, and Southern States, the white corn meal is greatly preferred. A very superior kind of yellow corn may be purchased in this neighborhood. It is the same grown by George W. Williams, Esq., of Bourbon county. It is three weeks earlier than the common corn, is remarkable for its yield per acre, and has a very small cob in proportion to the length of the grain. Its stalk is not inclined to shoot up to an excessive height, and admits of close planting.

Indian Slap Jacks.—Scald a quart of Indian meal; when lukewarm, stir in half a pint of flour, half a tea cup of yeast, and a little salt. When light, fry them in just fat enough to prevent their sticking to the frying pan. Another method of making them, which is very nice, is to turn boiling milk or water on to the Indian meal, in the proportion of a quart of the former to a pint of the latter; stir in three table spoonsful of flour, three eggs well beaten, and a couple of tea spoonsful of salt.

The Peach.—With the fertile soil of our country, we have but little difficulty in growing peach trees until they are three or four years old, when they are attacked by the worm in the root, or a disease called the yellows, and frequently by both. In either case the tree dies in two or three years. The following remedies have been found perfectly successful in preventing the worm in the root. When a tree is first set out in the orchard, apply three quarts of fresh or unleached wood ashes, and add ashes every spring. Another method is, to pour chamber lye around the roots of the trees several times during the spring and summer. The method pursued by Mr. Pell, of Pelham, Ulster county, New York, is to put half a peck of fine charcoal to the roots of each tree when first set out in the orchard, and adding a quantity each spring.—*B. G. Boswell.*

Bees Preserved from Moths.—To prevent the moth laying its eggs under the hive, I have for the last several years cut a mortise in the bench about an inch deep, and about two inches larger than the hive, and the hive is then set in this mortise, and the space of about one inch all around it is filled with mortar; then three inch augur holes are bored in the hive about two inches from the bench, for the egress and ingress of the bees, and a small augur hole through the bottom of the bench to let off water, should any get under the hive. I have near night watched the moths attempting to enter through these holes, and seen the bees chasing them away.—*Southern Planter.*

Agriculture.—What is actually known, even by the most learned, is still greatly less than that which remains to be acquired. How many questions are there which the practical man may ask, and which the possessor of all our present theoretical knowledge cannot satisfactorily answer! How many questions suggest themselves to the mind of the student in theoretical agriculture, which he records as subjects of future experimental investigation, for which, if time present, he may wish himself to find solutions, or to which he may anxiously wish to persuade others to seek for answers by laborious chemical research!—*Jour. of Agriculture.*

Tanners' Bark is slow of decomposition. On this account it is generally neglected as a manure. The best way of employing it is, undoubtedly, in the form of compost with lime and earth, or with liquid or solid farm yard manure, by which procedure decay is speedily effected. Tanners very frequently burn their spent bark, and apply the ashes to their ground.

Simple Cure for Croup.—We find in the Journal of Health the following simple remedy for this dangerous disease. Those who have passed nights of intense agony at the bedside of loved children, will treasure it up as an invaluable piece of information. If a child is taken with croup, instantly apply cold water, ice-water if possible, suddenly and freely to the neck and chest, with a sponge. The breathing will almost instantly be relieved. So soon as possible, let the sufferer drink as much as it can; then wipe it dry, cover it up warm, and soon a quiet slumber will relieve the parent's anxiety, and lead the heart in thankfulness to the power which has given to the pure gushing fountain such medical qualities.

Five crops within ten months have been produced by a lemon tree in the garden of Mr. C. F. Mills, Savannah, Georgia, and on the 28th November the flowers of the sixth crop were in bloom.

W. F. Karkeek, in a late essay on manures, says, where guano is drilled in with seed, not less than a ton of earth or ashes should be mixed with each hundred weight of guano.

If you feed apples to cows, don't give more than half a bushel night and morning; give them only half that quantity at first for two or three days. Sweet apples for hogs make as good meat as corn; they are best boiled.

+ The manure winter spread - will produce thousands of young apple trees - which may be transplanted to nursery rows.

Miscellaneous Notes.

The origin of that most superb specimen of the weeping willow, in Mr. Jacob Hoffner's garden at Cummingsville, is, that it was stuck in the ground, where it now grows, by a person who walked with it all the way from New Jersey to Cincinnati, as a walking cane, about fifty years ago.

Mr. J. Spratt, of Sharon, has presented to us some very fine wine, made of elder-berries.—He cultivates and takes care of the elder for the purpose. The wine is made of the pure juice without any sugar, or any addition besides a few cloves, depending solely on the natural fermentation. This is a favorite wine in England, and drank on cold winter nights just before going to bed with sippets of toasted bread. It has some peculiar medicinal virtues, being opening to the pores of the skin, and a remedy for colds and coughs, and affections of the lungs—it is also beneficial in cholics. We recommend this delicious wine to the notice of the committee on native wines.

The effects of the Horticultural Society of Cincinnati, are being felt far and near; and will no doubt create a wonderful change in our fruit market ten years hence. Indeed already the difference is becoming most perceptible. It is stimulating the raising of fine fruit on both sides of the Ohio. Mr. Latham, about five mile from the city, on the Licking, has about 270 acres of land, the greater part of which he intends covering with the choicest fruit. He has more than 1000 pear and 2000 cherry trees at this time under culture, and six or seven acres of the largest kind of foreign raspberries. His being on the Licking river will greatly facilitate the carriage of his fruit to the market. If the Baltimore Railroad is in five years open to the Ohio river, what an opportunity will then the large fruit raisers possess of shipping into the Atlantic cities and even to Europe,—their winter apples, of a size and quality such as the Ohio valley is almost alone capable of producing! Go on and prosper, all ye cultivators of the earth's most healthy, most delicious and useful productions pomological, until every wearied and thirsty laborer of our cities shall find a refreshment of this kind at the corner of every street, as plentiful, attainable and fine, as an excited imagination may picture in the beautiful fields of some elysium of the most exquisite and varied of Nature's fruit bearing offspring.

It seems to be pretty well understood that *natural* or *seedling*, live and flourish to a much greater age than grafted or budded, trees. All the old orchards of the country demonstrate this fact. No one has seen a grafted tree one hundred or one hundred and fifty years old;—yet it is well known that seedling orchards have attained more than that age. It is evident that some kinds of budded fruit is greatly deteriorating in some parts of the country,—the Newton pippin, for instance, which is now often small and knotty. Would it not be advisable for us to cultivate more natural trees, preserving the good, and destroying the bad? We should then attain new and improved varieties, and prolong the life of our trees. If we do not contrive to do this more generally than we have heretofore done, the best of our fruit will undoubtedly deteriorate, and run out in a short time. Yet, while we say this, we can boast even at this time of a goodly number of fine seedling fruits—particularly apples, in the west. And while on this subject, we shall take this opportunity of stating that it is our intention in future, chiefly to portray in our engravings in the Farmer & Gardener, the finest and most valuable of our western seedling fruits. This will stamp a local interest, and create also a general interest elsewhere for our Magazine.

That there is a very greatly increasing interest in the public generally, and among the practical men in particular, in all the objects embraced in agriculture and horticulture throughout the whole country, there cannot be the smallest doubt in every observing mind. Every farmer and horticulturist (except the mere machines,) sees the necessity of having an organ both to receive and impart information of all improvements; and many are willing to subscribe to such a work; but in order to do all the good they can to themselves and to their fellow men, they must not stop here; they ought to correspond with, and send in all the interesting and valuable facts possible to the paper they subscribe to, in order to carry out their views. It is no use for them to be continually saying they want a good agricultural periodical, and if they had such, that they would then patronize it!—Do they suppose that one man alone, can impart interest enough himself to such a journal? We are astonished that there are so many calling themselves intelligent beings who will argue in this manner. Can they suppose that a man can devote the greater part of his time to the necessary duties of a publisher and editor, and fill the work besides with original matter for twenty-four pages monthly; and this without much prospect of remuneration? No, that is certainly unreasonable; the proper way to proceed for all, is, (and few there are who cannot, unless they lie under the misfortune of not being able to read or write,) to set to work, and consider what they have to communicate, or what essays or letters they can pen which would help to make an agricultural magazine as valuable as it is intended it should be. If all would do this, we should soon have such a publication as is needed in every one hundred miles area.

There is, we learn, a book just published by

The quantity (of equally good wine) may be doubled by putting the same gallons of water to the juice and 3 lbs of sugar to each gallon of the mixture.

Saxton & Miles, New York, on Domestic Poultry, by Mr. Bement, well known everywhere as a good practical farmer, and an excellent writer in many of the agricultural papers of the day.—Mr. Bement has catered in some portion of his life, and is still catering for the public, in the largest hotels; he therefore may be justly considered a good judge of the qualities of poultry, and he has moreover been in the habit of rearing them from his earliest youth. We recommend this work, from the reputation of the author, and from other sources of recommendation, to all who take an interest in raising this kind of stock. We have not yet seen it, but if the publisher will forward it to us, we will endeavor to do it full justice, *pro* and *con*.

We have now two agricultural warehouses in Cincinnati, Ely & Campbell's, and Huxley & Co.'s,—the requirements and taste of the farming and horticultural class leading them to much improvement of this kind, it is expected that these two establishments will contain in a short time all that they may want in this line.

In conversing with an old farmer the other day, he informed us that a neighbor of his complained to him that he had sown a very fine kind of wheat, and that it had done very well, with the exception of there growing among it a large quantity of cheat. The old farmer told us that he gave his neighbor such directions as he had learned from experience would remedy the evil—they were these—to preserve such wheat as he wanted for seed for two or three years or more, and the cheat as well as some other weeds would lose their power of vegetation, and by these means the wheat would become pure. It would probably be requisite to sow more seed to a given quantity of land. Most light seeds part with their vegetating qualities, much more speedily than the heavier ones; and our friend informed us that this was the case with cheat compared with wheat. – better to float it out – in weak copperas water.

Cucumber vines have been cleared of the yellow bug by covering their tops with the finest pieces of wool left after carding.+ Speaking of the modes of dispelling noxious insects both to vegetation and animals, there can be no doubt that the smell of various substances, both animal and vegetable, decayed or otherwise, has often a very great effect in keeping them off—as spirits of turpentine for instance for the curculio on the plum, and tobacco and other things for the peach worm, and sassafras poles to keep off lice in hen-roosts. The general principles of the matter seem to be this, that any strong aromatic vegetable substance or liquid will drive off insects or animalculæ that exist on animal food, and any strong pungent animal affluvia will keep off animals that derive their living from vegetable food; as the burying of a dead rat or toad has kept off bugs from vines, &c.

We are very glad to see the subject of premiums for fruit, vegetables and flowers beginning to occupy the attention of the Cincinnati Horticultural Society. Next year we have no doubt we shall see this very desirable stimulus held out to our gardeners and amateurs. The next thing will be the purchase of a Horticultural Hall, or a piece of land near the city for a botanic garden or nursery for the Society.—Thus shall we proceed, step by step, in our inestimably valuable association, until we shall have gained such an advancement in Horticultural progress and improvement as will, in a few years, enable us to rival the greatest fruit, vegetable, and flower growing regions of the world beside.

The grounds for a public cemetery have been fixed upon, and we believe purchased—the old Garrard farm, about seven miles from the city. We consider this estate, in its natural formation and advantages, admirably adapted for the purpose in view, and singularly well shaped as a foundation for that aid with which a correct taste, can with grace and ease, improve upon the natural beauty of the spot. We contemplate this undertaking with that of the Horticultural Society, as a means of elevating and refining the public mind, and consequently advancing the cause of proper religious feeling and virtuous conduct in our community. The higher we advance from objects of mere sense, to those of a more spiritual and intellectual character, the greater is our elevation as intelligent and moral, and therefore happy beings.

All nurserymen and florists had better leave their catalogues at Huxley & Co.'s, near the Dennison House, as frequent inquiries are made there respecting such things. We would also suggest that it is certainly to the interest of all engaged in the above line as a business, to advertise in our work, as it is beginning to circulate largely among the very class of persons, amateurs and gentlemen, who have country seats, and who want trees and shrubs of all kinds, both for utility and ornament.

There has appeared a report of the Agricultural Survey of the County of Hamilton, by Messrs. Charles Whittlesey and A. Randall, which contains a mass of matter in the highest degree interesting to the farmer in every point of view. Every farm, or nearly so, has been visited, and we have accounts of stock, crops, fruit, and a great variety of other matter which throws a most desirable light on our progress and position in respect to agricultural and horticultural improvement, &c. The report can be obtained at Huxley & Co.'s, and Ely & Campbell's, in this city.

In our last number, we published the excellent address of Col. W. H. H. Taylor, before the Agricultural Fair, held at Mount Pleasant,

+ form a ring around the plants with wool cardings Saturated slightly with benzine.

in this county, (Hamilton,) on the 20th of September. We especially call the attention of our readers to the Colonel's remarks on the benefits derived by all farmers, old as well as young, from taking the best agricultural periodical they can find in the country of their operations, even if they should take a paper at a distance of the highest and longest standing besides; for it is absolutely necessary that the details of farming operations should be minutely described in the part of country where farmers dwell,—as soil, climate, and other circumstances cause a considerable variation in the practices even within a distance of one or two hundred miles.

We again and again, most earnestly and solemnly, call on all legislative bodies to give aid in forming a board, or some other department, in every State that has, as recommended by Washington, agricultural improvement for its object.

F. P. Whitcomb has a Nursery on the Miami Railroad, seven miles from town and two above Columbia, where he is attending to a small but select assortment of fruit trees, vines, and shrubs, both deciduous and evergreen. We omitted to speak of this establishment in our notices of such places in our last, but we intend including all engaged in such pursuits in the course of a short time. We understand that the whole of the stock of Mr. Whitcomb is for sale, it being on rented ground, as he has at present a wish to take up his residence in the East. E. J. H.

Premiums on Essays.

The New-York State Agricultural Convention meets in Albany in January. Agriculturists are invited from all parts of the Union. The following premiums are offered for essays, and writers in every part of the country will compete:

For the best series of essays on the importance of scientific knowledge in prosecuting successfully the ordinary pursuits of agriculture and horticulture, (copy-right reserved to the author,) $100.

For the best text-book on agriculture and horticulture for the use of schools, (copy-right reserved as before,) $100.

For the best essay on farm management, including details connected with the successful management of a farm, a gold medal worth $20.

For the best essay on the rotation of crops, adapted to the climate of that State, a gold medal worth $20.

For the best essay on subsoil ploughing, with results of actual experiments in the State of N. York, a gold medal or $20.

For the best essay on the culture and manufacture of silk, briefly stating results already attained in the United States, a gold medal worth $20.

For the best essay on the cultivation of the apple, for exportation as well as domestic use, a gold medal worth $20.

For the best essay, detailing observations made on the culture and diseases of the potato, with special reference to the phenomena of the extraordinary visitation which has largely desolated the potato crop in the United States, and embracing suggestions for counteracting the difficulty in the future cultivation of that crop, a gold medal worth $20.

For the best essay on the means of diffusing scientific knowledge in connection with agricultural and horticultural information, through the instrumentality of the public libraries and schools, with a catalogue of books suitable for the purpose, a gold medal worth $20.

For the best managed farm, considering the land, stock, and produce, with details exemplifying accurately the management of said farm, showing the expense and profit of cultivation, a gold medal worth $20.

For the most satisfactory report of experiments in turning under green crops as manure, on not less than one acre of land, $20.

Second best, 2 vols. of the Transactions.

For the best experiment in the preparation and application of manures, with details of the expense and all matters connected therewith, $10.

For the most satisfactory experiment on a stock of cattle not less than four in number, in ascertaining the relative value of the different kinds of food used, as compared with hay—with a detailed account of the fodder used, and the expense of raising and feeding the same—the experiments to be made in three winter months, or whenever satisfactory experiments can be made, $20.

Female Farmers.

In olden time, when men were scarce, and there was not so much cooking and washing of dishes in the kitchen—when one plate apiece was all that a man wanted for dinner, unless he unluckily broke it—in olden time, the girls took rakes (we do not mean for husbands) and helped to gather the hay and stow it away for winter. Oh, how gracefully they would manage the rake! Could they learn to manage husbands as well, what a heaven we should have upon earth!

Now, girls, we don't want you to help us in the field—we can do all the out door work: but we will just tell you what flatters and pleases us exceedingly. When we come to the house, tired and exhausted, we want you to commend us a little, and prepare us some drink and other refreshments.—*Mass. Ploughman.*

Everybody's Chapter.

The Potato.—It is principally to the famous M. Parmentier, that France owes the general use of potatoes. The following anecdote may give some idea of the assiduity with which this philanthropic individual labored to generalize their culture: It is well attested that he farmed some spots of ground, in the vicinity of Paris, for this sole purpose, though the prejudice against potatoes, was then so strong, that few of the poor persons to whom he offered the roots, would accept of them. However, M. Parmentier soon suspected that people occasionally stole his potatoes to eat them; he was well pleased at this, and continued to plant what he hoped would be purloined, rightly concluding that the experience of the thieves would contribute to diminish the established prejudice. After much trouble and many years, he had succeeded in propagating potatoes in several situations, when the dreadful scarcity, the consequence and effect of the revolutionary disturbances, suddenly rendered their cultivation universal; and now they form so constant an article of food, that the common people generally believe them to be aboriginal natives of the country.

Preservation of Apples.—Apples, intended for keeping long, should be carefully gathered by hand, when they are quite ripe, in dry weather. They should be spread singly on a floor, in an open room, for about ten days, and then stowed in an airy place, with a layer of dry wheaten straw beneath each layer of apples. By careful management, some kinds of apples are preserved in England for two years.

Kang-He's Inscription for the Christian Church at Pekin.—The following beautiful inscription, was, in the year 1711, in his own hand-writing, presented by the Emperor Kang-He, to the Jesuits at Pekin, for their new church at the Chung-ching-muen gate. Inscription on the front:—"To the true principle of all things." Inscription on the first column: "He is infinitely good, and infinitely just; he enlightens, he supports, he rules all things with supreme authority and sovereign justice." Inscription on the second column:—"He never had a beginning, and will never end. All things were created by him from the beginning; they are governed by him, and he is the true Lord of them."—*Pidding's Chinese Olio.*

Depth of the Sea—Artesian Well.—M. Le Saulnier de Vantello, a naval captain of France, has lately ascertained that the depth of sea between Calais and Dover, does not, at any part, exceed two hundred feet. The boring of the Artesian well, at Calais, has now reached the depth of three hundred and twenty-two metres. The water to be supplied by this well, will, M. Arago states, come from England, under the sea of course.

To Destroy Wasps Nests.—Professor Henslow has discovered that turpentine, placed at the entrance of the nest, was fatal to these insects. The best mode of applying it, is to put the turpentine in a bottle (as much as will merely wet the side of the bottle is sufficient,) and insert the neck of the bottle in the hole leading to the nest surrounding it with some earth. If applied in the dusk of the evening, every wasp will be dead by the following morning.

Immense Strawberry.—The Caledonian Mercury states that a Strawberry was pulled from the garden of Mr. David Thomson, Bread-albane College, Ceres, measuring nearly eight inches in circumference. Several others measuring six and seven inches, have also been raised on the same ground.

Egyptian Pea Plant.—A few weeks since, under the head of "Vegetable Phenomenon," a paragraph appeared in this journal, describing a pea plant growing in the garden of Mr. W. Grimstone, of Highgate, which had been produced from a pea found in an urn recently taken from a sarcophagus in Egypt, and where it must have remained nearly two thousand eight hundred and fifty years, during which period it had preserved its germinating properties. By the permission of Mr. Grimstone, this extraordinary production has been inspected by a great number of ladies and gentlemen, including several professional and amateur botanists. The pods, nineteen in number, have all become thoroughly ripened, and gathered in order to preserve the seed. The plant itself was also cut off and preserved, and the root left in the soil in order to ascertain whether it be an annual, perennial, or otherwise. In the ensuing season the seeds will be sown in four different modes,—one in a compost (as last season,) resembling the alluvial soil of Egypt produced by the periodical inundations of the Nile; a second in ordinary garden mould,—but both will be in a forcing frame; while the other two experiments will be made by sowing the seeds in the open air, but in the same kind of soil as the foregoing. Several letters have been received by Mr. Grimstone, requesting the favor of even a single pea, but which that gentleman has been compelled to decline; but it is understood to be his intention to offer one of the pods, with a view to its propagation in one of the royal gardens.

Magnificent Display of Dahlias.—This fall Prince's Garden, at Flushing, presented the most magnificent display of Dahlias ever seen. There were five hundred varieties, covering two acres. The exhibition of Fruits and Flowers was also very splendid.

A Culinary Desideratum.—The application of chemistry to cookery in France has produced a curious result, and one likely to be as useful as curious. M. Milot, of the Academy of Sciences, has succeeded in obtaining by distillation, in a pure, colorless, and liquid form, all the properties of the various culinary vegetables. Thus he can put you up a bottle of carrots, parsnips, turnips, or onions, and you may carry it all over the world, certain of having with you the true flavor of the vegetable. A table spoonful is enough for one pound of meat. The secret lies in the mode of distillation, by which the offensive parts of the vegetable are left. It is already an object with commercial men to export these essences, which are termed *Aromatiqae*, to the French Colonies; and with the Government there is an intention of using them extensively in the Navy.

Another Use for India Rubber.—An English paper says that caoutchouc is an excellent remedy for toothache. After the cavity of the tooth is cleaned, a piece of caoutchouc is put on a wire, and being softened in the flame of a candle, is pressed while warm into the tooth; thus the air is kept from the nerve, and the cause of toothache removed.

The Monkey's Trick.—Lord Taynham's French cook so trained a monkey as to make him useful in plucking his poultry and winged game for the spit. The monkey was one day following his occupation at the open window of the back kitchen, and had just plucked one of a brace of partridges, when a hawk pounced upon it and carried it off. Poor Pug was in a sad fright, well knowing the licking that awaited him. *Nil desperandum*, however, was his motto. He plucked his courage up and the remaining partridge, and laid the bird in the window. The hawk, pleased with the feast, returned for another tit-bit; when Mum seized him, and in spite of his scratching and screeching, plucked him alive, and laid him and the partridge down before the cook, and with a gesture stronger than language, seemed to say:—"It's all right; there's your brace of birds—a fair exchange is no robbery."

Grouse.—This fine bird, which is thought so much of in England, is to be found in great abundance on the prairies of Illinois. They are often brought into Chicago in wagon loads, and sold at from six to twelve cents each, some of them weighing three pounds. They are caught in the winter in great numbers, in nets and snares, as they gather round the wheat stacks.

The English Penny Post.—We learn from the best authority, that the English Penny Post, after paying the whole of its own expenses, yields an income of more than six hundred thousand pounds a year. The opponents of the system attempted to make it appear otherwise, by merging the expenses of Foreign Packets, Steamers, &c., in their estimates; but this attempt was exposed, and the amount of annual profit ascertained as above. The franking system is wholly abolished! Even the Queen herself cannot frank a letter, and is compelled to pay her penny, and thus to acknowledge the supremacy of the Post Office law, as much as any of her subjects, whenever she writes to a friend or other correspondents.

Oregon.—A letter from Mr. Burnet, one of the Oregon company, which is published in the St. Louis Reveille, says:—"You will find trees here even more than three hundred feet high. This tall timber is at the mouth of the Columbia, and in the Cascade mountains.—But, even here, it is two hundred to two hundred and fifty feet high. I will not persuade you, nor will I any of my friends, to come to this country; but were I in the States again, I should certainly come myself. For three hundred dollars, you could purchase one hundred young heifers; and in driving them here, you might lose from five to ten. When you reach here, they would be worth four thousand dollars, and in ten years, without labor, would make you a splendid fortune."

Apple Trees.—Apple trees live to a great age. There is a tree on Peak's Island, Portland Harbor, that has been known to bear fruit every season for more than a hundred years. There are apple trees in Plymouth county, Massachusetts, nearly two hundred years old. They continue to bear good fruit.

A Railroad from the Atlantic to the Pacific.—We extract the following from the St. Augustine News, of the 23d November:—"By an arrival at Key West, a few days since, of a vessel from the Spanish Main, we learn that the French Government have been actively engaged for the last two months in laying rails, grading, and otherwise making preparation for a steam conveyance from Porto Bello to Panama, thus connecting the Atlantic and Pacific Oceans, and doing away for the present any intent upon cutting a Canal at the Isthmus."

Hemp.—The following statement of hemp received at New Orleans may help to show the rapid increase of the cultivation of this important article. In 1841 and 1842, the entire receipts at New Orleans were only twelve hundred and eleven bales; in 1842 and 1843, they rose to fifteen thousand bales; and in 1843 and 1844, they reached thirty thousand bales, or about five thousand tons,—the increase being almost exclusively from Illinois and Missouri.

The Fulton Pear.—This pear, which is a great favorite with the people of Maine, originated in that State, and received its name from the lady who produced it from seed about fifty years ago.

Str wberries.—The Hartford Times, of October 1st, says:—"Some green and ripe strawberries, picked in the field at East Windsor, by Mr. Henry Case, on the 27th of September, have been left with us,—an unusual circumstance for this season of the year."

The Oldest Horse in the Union.—Mr. Mauran, of 72 Wall street, New York, owns a horse that is forty-two years old; he drives him to Staten Island, almost daily, and he can travel a mile in less than four minutes. If any one has an older one, let him "trot him out."

Exportation of Indian Corn.—The quantity of Indian corn shipped from New York to England during the first eight months of 1844, was one hundred and ninety thousand bushels. Same months in 1843, only thirty-five thousand bushels.

Wool.—Four thousand pounds of wool from Chicago were sold at Buffalo last month for twenty-five cents per pound. The increase of wool in the West is about twenty-five per cent. a year.

Apples.—It is said that American apples make quite a display on the fruit stalls in London.

☞ Look at the swamp and meadow lands, with which our country abounds, that are now worthless, and causing sickness and death in their vicinity. All these might be reclaimed, and made the most productive land, by a small outlay of time and capital. The owners have neither, because they have too much land already calling for their attention. The muck contained in these places, can be made to pay better interest than bank stock; yea, if properly used, it may be the farmer's mine of wealth.

☞ The scheme of an Agricultural College in England, receives very influential support. A farm of over four hundred acres, near Cirencester, is to be the example or experimental plan of the institution.

☞ Several fine exotics are now in full perfection in the garden of the Luxembourg, and attract many visitors. Amongst them are two Bananas, two Mexican plants, the stalks of which cover an enormous surface of ground, and an Apple tree from Brazil, the fruit of which has a skin as dark as that of the Damascus plum.

☞ A small pinch of Guano, thrown into the water in which cut flowers are placed, will cause them to remain fresh for a length of time.

☞ The Iowa American Indians, now exhibiting at the Egyptian Hall, belong to a tribe from the interior of the country, which is reported to be a very honorable race, being always honest in their dealings with strangers, and never breaking their faith when once it is pledged. They must not be confounded with the tribe of the I O U's, who are natives of Pennsylvania, and bear a very opposite character.—*London Punch.*

☞ There is a root of Fennel growing in a garden at Chesterford, England, which is supposed to have been growing two hundred and fifty-four years.

☞ Horne Tooke was the son of a poulterer, which he alluded to when called upon by the proud striplings of Eton to describe himself.—"I am," said young Horne, "the son of an eminent Turkey merchant."

☞ The culture of Rice has just been tried with full success at Camargue, near Artes, France. The vegetation of the crop is so fine, that no doubt remains that the soil there is well adapted for it.

Lime.

The analysis of soils, in a certain sense, and with a view to certain special objects, is far from worthless or deserving of neglect. One soil, by an easy examination, is found to be deficient in organic matter, and the advice may be—try the ploughing in of a green crop; another may contain much vegetable matter in what is called an inert state—try upon that a dressing of hot lime; a third may contain sulphate of iron and alumina—drain deep, plough, lime or marl, and summer fallow such land, and you take the shortest road towards a cure. Again, one may ask, why does not lime benefit my land? An easy analysis will reply, because it abounds in lime already, and must have a season of rest from liming; or because it is poor in organic matter and requires more liberal supplies of manure; or, if neither of these is the case, because your land requires draining. So the subsoil may be yellow and noxious when brought to the surface, or may kill the roots of the plants when they descend to it. Then a simple examination may prescribe draining and subsoiling, that the noxious matter may be washed out by the rains, and the whole mellowed by the admission of air. Or it may be rich in lime, which has sunk from the surface, and after frequent liming has produced a real marl bed beneath; and here the chemist may say, plough your land deep, and bring up the marl, and thus save the coat of lime for a season at least.—*Journal of Agriculture.*

Steam Plough.

A manufacturer in Cincinnati has forwarded to St. Louis a plough that is to be driven by steam, for turning up the prairies of Illinois.

Rowe's Corn-Crusher.

(See engraving on opposite page.)

Among the many improvements of late, in the Agricultural world, there are probably not many more valuable than those made in preparing food for stock. This, if it is not exactly making two blades of grass to grow where only one grew before, it is, at any rate, making one ear of corn go nearly as far as two. We have just seen in operation, at Mr. Brown's, who keeps a dairy, a little beyond Fulton, a most extraordinarily effective machine, a Crushing Mill, invented by Mr. James Rowe, of Tennessee. It is built in a way calculated to be very durable, and from its evident strength, it seems hardly possible for it ever to wear out, both as to the castings, (which are of chill cast iron,) and the frame work. The construction of it is very simple, although its mechanism is admirably adapted for the end in view—for this, we cannot conceive its equal. We witnessed this mill grind into meal fine enough for feed for animals, and a portion of it for man, six bushels of unshucked corn, in thirty minutes, and with but slight labor for two horses. Cobs, shucks, and corn, were in one fine mass, ground altogether. Sheaf oats, and an equal quantity of corn, we were told, and we do not for a moment doubt it, are qnickly converted into fine meal. The same with oil cake, and any other article wanted to be pulverized, including lime-stone rocks and bones, down to apples. We should not speak so confidently of the excellence of this machine, had we not seen it perform its work —and we can therefore strongly recommend its use to all large farmers, stock-raisers, dairymen, and stage-horse proprietors. Indeed, among these it has been already much adopted in different parts of the west and south, for several years, and had we space,we could adduce the strongest testimonials of men we know, in its favor.

We consider it hardly necessary, in this advancing age of agricultural and general knowledge, to state the advantages of feeding animals on food more than half masticated for them by machinery, over that which is in its whole or natural state.—Every observing farmer must be aware of the great difference. An extensive feeder of cattle for the Philadelphia market, has said "that a bushel of meal made of corn and cobs is fully equal to a bushel of meal made of corn and oats, and that animals never cloy on the first named meal." The celebrated agriculturist, Mr. Colman, states, in his highly valued Report to the Massachusetts Legislature, that Indian corn is the best basis for the food of animals, and that where seventy bushels of corn are the product of an acre of land, that it is the cheapest food. Now, with such a machine to grind it in addition, what article of food and mode of feeding can be more economical. It is the practice to mix a little water with the meal of the corn-shucks and cobs, made by this mill for horses; and for cows, it is made more moist—hogs, probably, would do better on the corn and cobs ground without the shucks—also with water. When we have seen a profitable article for the farming community, we are always anxious to bring it forward to their notice; we consider that we have done but a duty to the public, and to the proprietor, in saying as much as we have on this subject, and in such favorable terms. For further particulars, we refer our readers to the advertisement on our cover; and for the price, its mode of being put up, and where the castings are to be obtained, we refer them to the Circular left at Huxley & Co.'s Agricultural Warehouse, East 5th street, near the Dennison House, Cincinnati.

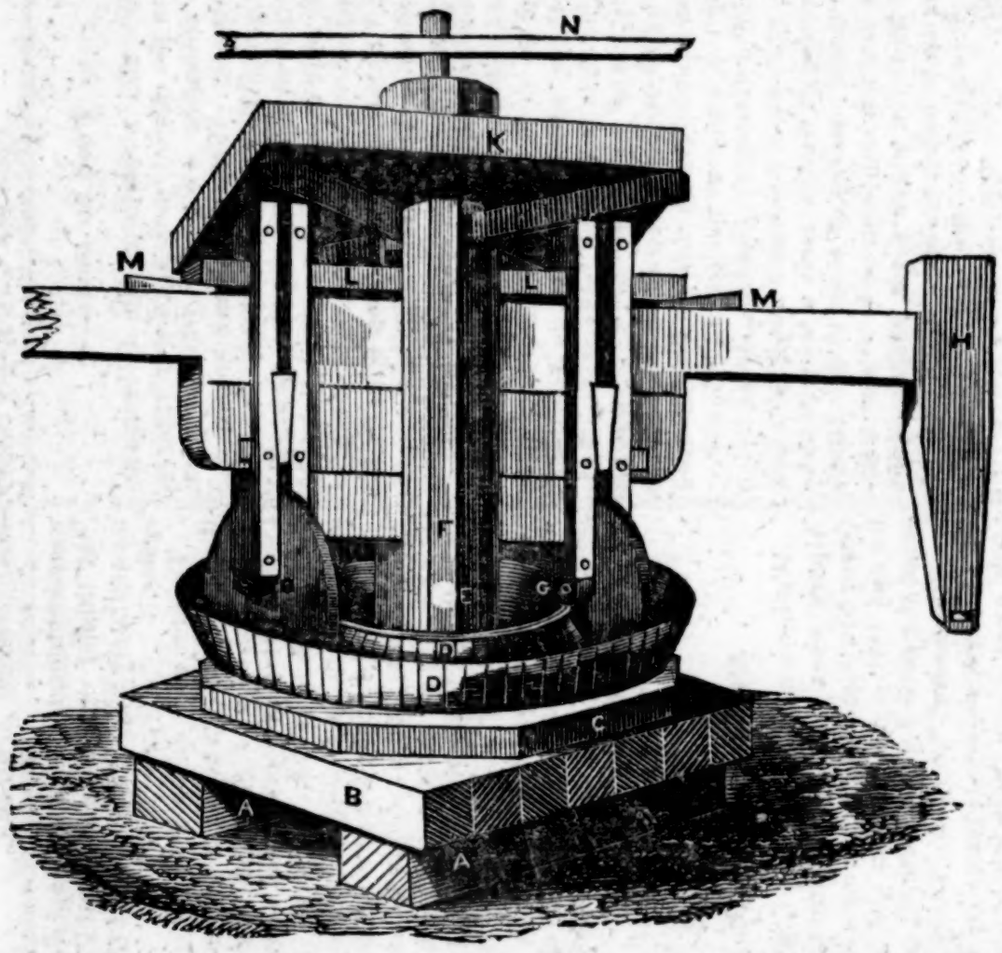
E. J. H.

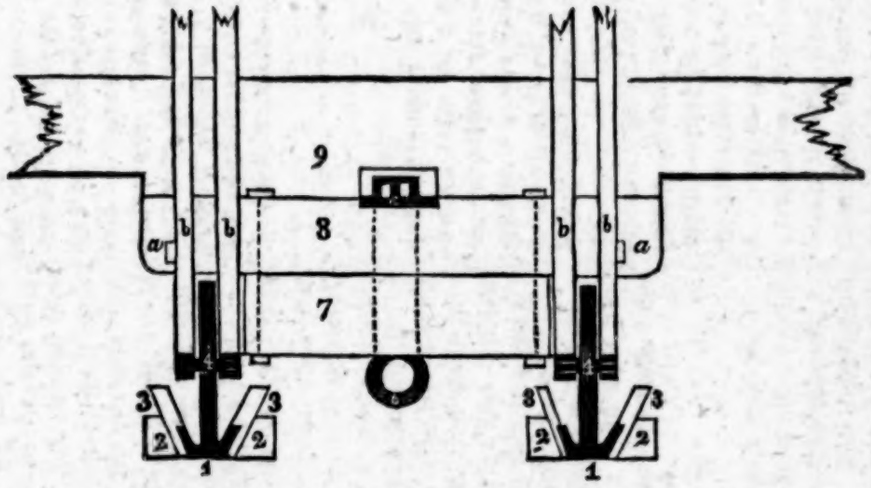
Farming Capital.

From a communication of Mr. L. Durand, we make (says the Albany Cultivator) the following extracts:—

"I think it correct to say, that a liberal expenditure of capital in farming, will ultimately pay better than when laid out in any other business. The difference between capital laid out in farming, and that laid out in manufacturing, is, that all which is expended in the latter beyond the actual profit of the goods manufactured, is a dead loss, while that which is laid out on the farm, under good management, causes it to improve and increase in value from year to year. In manufacturing, the interest on the capital may be received within six or twelve months. In farming it may not be so, but it will be sure to give its return in a series of years. Another item which has been much neglected by farmers, is that of purchasing good implements to carry on their farming operations. In this country, where manual labor is high, a farmer should obtain as many labor-saving implements as can be used to advantage. Get the best implements to be had, even if you have to go out of the State for them, and you will thus be enabled to perform more work in a better manner, beside saving much labor, and preventing a great deal of *fretting* and ill temper. Try it and see."

Captivated John S Luckey – his 4 sons Lee one built for me on 15 for part of 15 farm near Johns.





ROWE'S PRIZE CRUSHER.

Food for Cows.

We would recommend the follwing article to the careful perusal of our readers, as it embraces a topic of great practical importance. With those familiar with the writings of M. Chabert, and his exhalted character as a scholar, any commendation on our part would of course appear superfluous.

M. Chabert, the director of the veterinary school at Alford, England, had a number of cows which yielded 12 gallons of milk every day. In his publication on the subject, he observes that cows fed in the winter on dry substances give less milk than those which are kept on green diet, and also that their milk loses much of its quality. He published the following recipe, by the use of which his cows afforded him an equal quantity and quality of milk during the winter as during the summer.

Take a bushel of potatoes, break them while raw, place them in a barrel standing up, putting in successively a layer of bran and a small quantity of yeast in the middle of the mass, which is to be left thus to ferment during a whole week, and when the vinous taste has pervaded the whole mixture, it is given to the cows who eat it greedily.

We have been promised a communication on this subject by a person to whom we casually mentioned the views of M. Chabert, and who has some experience of late as regards the process he commends. Experiments of this description are much needed, at this day, and we are glad that there is one among us, if no more, who is disposed to make them, and favor us and the public with the details.—*Maine Cultivator.*

Timber.

At the discussions of the Farmers' Club at New York, interesting as well as important facts are frequently evolved. At the last meeting a member stated that timber should be cut down in May or June, when the sap is active. He instanced several facts from a paper by Hon. Timothy Pickering, laid before the Massachusetts Agricultural society in 1821, which states that oaks fell in May lasted 22 years—those cut in February lasted but 12 years, though exposed under the same circumstances. A farmer in Mass. cut a birch for a well sweep in May and peeled the bark off. It lasted 17 years, whereas birch cut in the winter with the bark left on, does not last more than one year. Many other similar cases were enumerated from the paper. He said that timber cut in June should be sawed immediately after it is cut, as it then works easier.

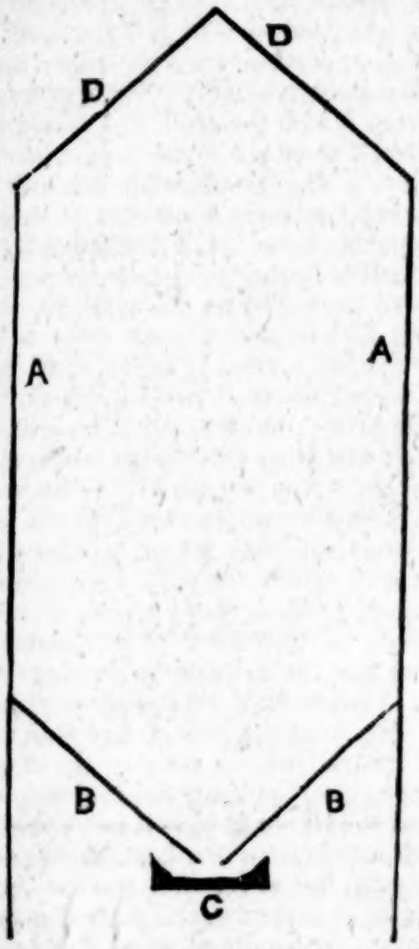
Timber will decay under three conditions. First, by being moist under a free circulation of air: second, when subjected to the action of gasses, and shut out from the air; and third, in water when in contact with vegetable putrifying matter. Timber kept dry in a free circulation of air would never decay. This is true of oak. Timber has a tendency to absorb moisture from the atmosphere, and thus decay. Alkaline roots and acids preserve it.—Hence the Kyanized timber which is saturated with chloride of mercury, or chlorate of iron, zinc, or copper.—Common salt has this tendency.

Alpacas in Scotland.

We have seen a male and female of the Alpaca species at Craigbarnet, Lennoxtown, Stirlingshire, which have been there for the last eight months, and they have stood the severe winter without injury, and we are assured are more hardy than our native sheep—they require *less* food, and could exist where sheep would die. There seems hardly to be any kind of food they will not eat—they eat turnips, hay, oats, and beans—they are more partial to meadow than to rye grass hay. These animals are now in the highest order and in the most perfect health—they are jet black, and follow their keeper like a dog, and are very elegant and interesting. The weight of the fleece of last year was 17½ lbs. Their worthy owner is of opinion, when the navigation between us and South America is diminished as to length of time, which steam will most assuredly accomplish, thousands of Alpacas will be brought over—our hills will be covered with them, and they will become a source of great wealth and profit to the proprietors and farmers of the highland districts, for these animals will thrive upon that kind of *coarse bent*, which neither horse nor cow nor sheep will look at or touch.—*Foreign Correspondent American Agriculturist.*

Cure for Founder.—The seeds of sunflower; the best remedy known for the cure of founder in horses. Immediately on the discovery that your horse is foundered, mix about a pint of the whole seed in his feed, and it will effect a perfect cure.—*Cult.*

The Self-Supplying Poultry Feeder.



Messrs. Editors:—I have read and heard a good deal said about feeding poultry so that they could not waste their feed—but never heard or saw any thing described for that purpose. I have tried many ways, but found it difficult to keep them from wasting their feed, if I gave them any quantity at one time, that they could get at.

My present box, of which the above is a rough draft, answers my most sanguine expectations. I do not have to feed but once in a month, or according to the number of hens I have.

The above is an end view, with the end boards off. A A, the sides, five feet long, four feet high. B B, the bottom, or two inclined planes, with an opening of one inch at the bottom, for the grain to pass through into C, a board twelve inches wide, one inch below the inclined board B, and six inches from the bottom of the end boards. The end boards serve as feet for the box. The bottom board, C, has a cleet on each edge one and a half inches high, to prevent the grain running over. D D, the top; one side has hinges to let the lid down, to put the feed in. There are three apartments in the box, for corn, oats, and wheat, or buckwheat. Corn, I think, the best; they eat the most of it.

The end boards are upright, and held together with two cleets, one at the top, one at the bottom, for the bottom board, C, to rest on. The sides run lengthwise. The top should be tolerably steep, to prevent the hens roosting on it. Stretch a cord from one end to the other, four inches above the top. Point on two sticks, for that purpose. The advantage of this box is, their feed is always ready, (if you fill the box) convenient to get at, clean, and they cannot waste it. As fast as they eat it off of the bottom board, it runs down till all is out.

My hen house is sixteen feet square, eight feet high to the square, with a cellar the same size as the house, seven feet deep.—The feed box is in the cellar, the nests are in the cellar, and also the water in cold weather. There is a tight floor laid, which keeps all clean below. There are two stair ways, one for me, and one for the hens. For nests, I use nail kegs; saw them half in two in the middle, one head out. Take off the upper half one side; the other serves as a partition between the kegs, to keep the hens from quarrelling. They are placed on shelves, near enough just to admit the kegs to keep them steady, one foot between each nest. Cut hay in the cutting box for nests. Long hay or straw, they pull out with their feet, when they leave the nests. I prefer nests that can be taken out and cleaned.—I gather the eggs every evening, after the hens go to roost. All the hens found on the nests, are put into prison, and well fed. Let them out every Saturday; if any go back to set, they are locked up another week. If they are prevented from setting, they will soon go to laying again. I use chalk nest-eggs, and give them all the meat and cabbage they will eat during the winter. They are very fond of hog's liver and hearts. I have kept about one hundred hens upon an average; the house is large enough for three hundred, the number I intend to keep the coming year. The roosting poles are one and a quarter inch strips, sawed from pine boards—one corner rounded off, placed on three strips of boards for joist, nailed to three other strips, which are nailed to the rafters, hanging.—One tier of roosting poles is placed above another, the same pitch as the roof. The poles are eighteen inches apart, the upper ones in the centre, over the lower ones, (in hot weather they take the lower poles, in cold weather the upper ones). The lower poles are four feet from the floor, the upper nine feet. They serve as a ladder for the hens to go up on!

As I keep an account of all my operations, I can tell what the profits have been. The expense I cannot yet tell. Next year I shall know that. Last year I sold $71 worth of chickens and eggs. The eggs brought me fifty dollars, and fifty cents.—The present year ends in May. It will be more than last. Next year, with three hundred hens, of course it should be more still. JOSEPH MCHANNON.

Mack's Hill, near Reading, Ohio.

The Peach.

Messrs. Editors:—I noticed an article in your Magazine for October, from N. Longworth, Esq., wherein he questions whether the "pit of the budded peach will produce the same fruit as the bud, or as the stock, or a mixture of the two."

It will produce neither like the stock, or bud, with any certainty; not like the stock, for that ceases to have any influence on the seed, any more than it does on the fruit, for it is no more the same stock, but like the bud, *as much as if on its own stock*, (from the bud upwards), and is as likely to produce fruit like itself, as if on its own stock—there are some varieties that do produce their kind with more certainty than others, particularly if the tree from which the seed is taken, stands quite by itself. I have had the Early York, or Red Rareripe, Nutmeg, Malacaton, and the White Blossom or Willow (as they are called at the East) very frequently produce the same as from budded trees, but experience proves to me that there are no varieties that will in all instances, bring the same, or in any certain number of cases. It must I think, be evident to any one, that where there are a number of varieties standing contiguous to each other, so as to be impregnated, one from another, that they would not be likely in many, if any cases, to produce the same, but partake more or less of each other, producing new, or different varieties. I have found that it is from isolated trees, (or from a number of the same variety only) that we must look for the same kind, with most certainty. My experience is quite at variance with that of Mr. Longworth, in one particular. He, it appears, planted pits from none but fine fruit; and from many trees allowed to produce fruit without budding, all, save one, proved worthless.

I brought with me, several years since, from the East, pits from fine varieties of budded peaches, and out of three or four hundred, which I raised from them, I selected some thirty or forty trees, to produce fruit, without budding—most of them have produced fruit (the first last year) and *not one* has produced an inferior quality—all good, and some very superior, and in most instances resembling more or less the fruit from which the seed was taken, there being but five or six *distinct* or *entire* new varieties. The result with me has been somewhat similar in a number of cases; in one instance, however, I planted sixty pits from the Red Rareripe (an isolated tree) fifty of which proved to be the same variety.—I do not believe that all, or even a large proportion, of seeds, if taken from an orchard where the fruit is all good, will produce fine fruit; but that a portion will, I do believe; and from an orchard where all are inferior, you may expect all to be worthless. You will notice that I do not let all grow promiscuously (if all are from good seed), but select such only as appear to indicate a good variety, which I believe can easily be told by a close observer of practice and experience in raising peach trees. I am continuing the propagation of the peach, from the pits of fine fruit planted by themselves, for the purpose of ascertaining as near as may be, the proportion of good to inferior that will be produced.

In an article from Mr. Longworth, on the strawberry, he says, that "when in any variety of strawberry, the male and female organs are both perfect in all the blossoms the fruit is always small," and that in "some varieties that have the male organs perfect in all the blossoms, and both organs perfect in a portion of them, some very large fruit is produced a portion of the blossoms produce defective berries, and a large portion prove entirely barren." Now may I inquire of Mr. Longworth, if those producing the imperfect berries are deficient in either male or female, or those only that prove entirely barren; for I observe that those producing the imperfect fruit are generally, (and I believe always,) well studded with seeds, although devoid of pulp in part. Is it not rather owing to the season, soil, or cultivation, that the fruit is imperfect? For how can either the male or female organs be imperfect, and produce perfect seeds? or can they be perfect in the same plant one season, and not in another; for in some seasons most of the berries fill well, and in others very few, in the same variety.

Will Mr. Longworth please inform us if any one variety of the male is preferable to another, for impregnating the different varieties of the female plants—and does the male plant ever produce the female, or

the female the male by offsets. I have never discovered that they do.

I am cultivating a seedling which originated at my father's, several years since, having the male and female organs in the same plant, both of which I consider perfect, and I have attempted the cultivation of no variety that equals it in quality, flavor, or productiveness, and if not large is of good size, many of the berries measuring three and a half, and four inches in circumference, and for the last two years, I have cultivated no other male plant, using this variety only, for impregnating the female plants of my other varieties, Keen's Seedling, Hovey's, Hudson, &c., all of which have filled well. I am now raising from seed of the three last named, impregnated by the former, (which has taken the name of Burr's Seedling.) Some of the plants are very strong and vigorous, and will produce fruit next season.

Very respectfully yours, J. BURR.

Columbus, Ohio, 28th Nov. 1844.

The Culture of Perennials.

Extract from the manuscript of the American Flower Garden Companion, by E. SAYERS.

PERENNIAL HERBACEOUS PLANTS.

Perennial herbaceous plants, are those which die down to the root yearly, the roots of which remain many years; they are exemplified in the *Phlox*, *Pæony*, *Golden-Rod*, *Asters*, and many other kinds of native plants.

There is no class of plants more deserving general culture in the flower garden, than perennials; which, when once introduced, require but little attention; their increase is also of the most encouraging nature, which, in most varieties, is simply the dividing of, or parting the roots, in summer, after they have done flowering, choosing a moist, rainy time for the operation, in order that they may readily make young roots, and become well established before winter; by this method, perennial plants generally flower better in the spring, than in the most general method of planting late in the fall or spring; their roots, in such instances, are not so well established and consequently flower weaker.

Herbaceous plants may be divided into three classes, namely: Bulbous, as the *Tulip*, *Hyacinth*, and most Lilies; Tuberous, as the *Dahlia* and *Pæony*; and Fibrous, as the *Perennial Phlox*, *Coreopsis*, *Delphinium*, &c. These separate divisions may be again subdivided into hardy and tender, with reference to the different climates to which they belong: for instance, among bulbs, *Tulips* and *Hyacinths* are hardy—the *Jacobean Lily*, *Mexican Lily* and *Gladiolus Citycinus*, are tender. Among tuberous roots, the *Pæony* is hardy, and the *Dahlia* is tender; and among fibrous, most kinds are hardy, (and indeed, the greater portion of the best hardy perrennial plants are indigenous to this country.) Although, in many cases, they are killed in the winter by *wet* saturating their crowns, when left bare and uncovered; it is therefore necessary that they should be partially covered in the winter to guard them against being injured in that manner.

In planting hardy herbaceous plants, the principal object to be borne in mind, is their height, color, and time of flowering, in order that they may be so distributed in the beds as to form a pleasing variety, which may be effected by referring to the Descriptive List, subjoined hereto. Care should also be taken that the plants are so chosen as to have a succession of flowers during the season. This may be greatly facilitated by cutting down a part of the young shoots of Delphiniums, early flowering, Phlox, &c., to the ground, about the time they are beginning to show their buds; by this method, a succession of the same kinds of flowers may be kept up during the season. Those which are cut, being deterred from flowering make a second growth, and come into flower, after those of their natural growth have exhausted themselves.

American Apples.

The Northern and Eastern papers are frequently urging farmers to plant their orchards, and among other inducements, are holding out the demand for apples and consequent exportation to Europe. The apples from the United States, are far superior to those of England, and are retailed in London, at 6d apiece. They are considered by the medical faculty as very healthy, and are recommended by them to convalescents. Dr. Dick, of Edinburg, in his late popular and valuable treatise, entitled "Derangements primary and reflex of the organs of Digestion," a work which ought to be in the hands of every dyspeptic, says, in page 211, (where he is strongly recommending herbaceous aliment,) "A ripe American apple, well masticated, has been employed by me as an auxiliary and occasionally as a principal, in the treatment of the irritative and hyperæmic forms of gastric derangements." "A ripe American apple, or two or three dozen of grapes, or two or three oranges, or part of a pomegranate, taken at these times, act as valuable reducements of the *chalews*, *douleur*, *roguer*, *temeur* of the gastric mucous membrane." These four conditions are, as Brousess justly remarks, the essential ones of all inflammation.—*Am. Far.*

Plaister, ashes, and lime, mixed; put a handful in each corn hill.

The Rose.

We take up this favorite again: it has long been, and will long continue to be, the most popular of plants, either for house or out-door culture. Great additions have been made to it within the last few years, most of which are mentioned in "Buist on the Culture of the Rose," a small work which should be in the hands of every rose fancier. We propose to condense from it, and present some of its descriptions in that way to our readers.

There is hardly a door-yard, or small or large garden in the country, where roses do not grow, but in many, most, instances, without care, and of an indifferent quality. At a very small expense this may be remedied. Almost any soil will answer for them, but the flowers will be infinitely better, and the plants stronger, if the beds are made *rich* with a good proportion of well rotted manure and leaf-mould from the woods, with a mixture of sand, when it can be had; dug *deep* and well mixed. Beds for flowers are now often cut of some fanciful form in the sod; when so, or if mounds are made, they should not be made small, unless when it is necessary; eight to twelve feet diameter is little enough, and is not so large but that they can be seen to advantage, and be kept clean with ease.

I may say here, that for a small bed, the roses that bloom during the whole season are now considered the most desirable. They will be mentioned in a future number.

ROSES THAT BLOOM IN JUNE.

The first division mentioned, is the Rosa Alpina, *or Bonsault.* One variety of it, *Purpurea*, is extensively known in this vicinity under the name of Purple Noisette. It is a profuse bloomer, very showy, and a rank grower. They are without fragrance, except *Inermis. Amadis* or *Elegans*, *White Bonsault*, and *Gracilis*, are the most prominent.

Rosa Sempervirens, *or Evergreen Rose*, will not prove so here. *Adelaide D'Orleans*, pale rosy blush. *Donna Maria*, nearly white. *Felicite Perpetuelle*, is not a perpetual rose. *Sempervirens Pleno*, is perhaps the best.

Rosa Banksiana, very beautiful climbing roses, *white and yellow*, not hardy here; flowers small, in clusters.

Rosa Multiflora, often called the Wreath Rose. *Grevillia*, is pretty well known, and highly esteemed. *Laure Davonot*, is one of the most beautiful. *Russelliana*, is exceedingly strong in its growth.

Rosa Rubifolia, the *Prairie Rose,—Beauty of the Prairies, or Feast's Queen,*—is a large cupped and beautiful climbing rose. *Perpetual Michigan*, is said to bloom twice under some circumstances. *Elegans*, or *Chillicothe Multiflora*, is a very graceful, pretty variety. The *Montjors*, is well known here.

Rosa Rubignosa, *the Sweetbrier.* The odor of the young wood is exceedingly pleasant. The varieties mentioned are *Celestial, Rose Angle, Double Red, Double White Hip.*

Rosa Lutea—*Yellow Austrian.* The Rosa Sulphurea, or Double Yellow of Lindley, has been sold under a great variety of names; this and the *Harrisonii* are worthy of cultivation.

Rosa Centifolia, *the Provins or Cabbage Rose*, takes its name from a town about twenty miles from Paris. The *Old Cabbage Provins*, the *White Provins, Dutchess D'Orleans*, bright rosy pink. *Crested Provins*, often called Crested Moss, considered the best. *Reine Caroline* and *Grand Bercam*, deep rose color, are the prominent varieties named.

Rosa Centifolia,—variety Muscosa,—*the Moss Rose.* The *Blush Moss* is well known. The *Rouge, Rouge De Luxembourg Ferrugineuse*, is sold under a variety of names; the flowers are bright red, imbricated, and perfectly double. *Ascan Foulard*, is of a rosy violet color. *Provins Moss*, has large white flowers in magnificent clusters. *Perpetual Red Moss*, has made its appearance, but is not known here yet. *White Bath*, or Clifton Moss, is pure white, of rather delicate growth. *Laffey's Perpetual White Moss*, or *Quatre Seasons Mousseuse*, of the French, is very desirable.

C. W. B.

(To be Continued.)

New Works on Horticulture.

If sufficient encouragement is given, it is the intention of Mr. E. Sayers, a scientific and practical gardener, and the author of several highly esteemed horticultural works, to publish separately, in small size and cheaply, works on the Rose and Dahlia, and perhaps a manual on house plants and city flower gardens.

☞ Oats are injurious to orchards. Orchards should be manured, or at any rate round the trees; in time the trees exhaust the land.

Amaryllis Formosissima.

"I can find treasure in the leafy showers
Which in the merry autumn time will fall;
And I can find strong love in buds and flowers,
And beauty in the moonlight's silent hours.
There 's nothing nature gives can fail to please,
For there 's a common joy pervading all."

This genus of flowering bulbs is better known under the name of Jacobea Lily, which is one of the oldest varieties we have in cultivation; and was imported from South America, where it is found in its pristine state about ravines.—The cardinal beauty of this flower alone has established the merit of its position as a desirable plant, and worthy of cultivation in every collection, however limited a person's tribe of Amarylladine plants may be. This bulb may be considered as tender, and if planted out in the open ground in April or May, will flower well, and require no more attention until October, when the foliage will be sufficiently matured to be taken up, the leaves dried gradually in a room until the following spring. This bulb, like most of its species, flowers before the leaf or the grass is expanded, and such is the rapidity of its growth, that the stem will be up and the flowers expanded, taking you by surprise, in a few days; and if planted in rich soil, will frequently throw up two stems with several flowers at a time, with such imposing rich crimson scarlet colors as to defy any velvet to bear a comparison to their richness. The flowers are not so compact as many of the tribe of Amaryllis, but their richness of beauty fully compensates for that deficiency. The cultivation of Amaryllis Formosissima is generally confined to pots, and will do equally well as those planted in the open ground, but will require attention, and a shady situation. It is said, if you take up the bulb in the summer, cut off the foliage and root fibres, and plant again, it will flower the same season. As I never tried the experiment, I should be loth to vouch for its correctness, but I had the above related by an experienced gardener, and if true, which I have no reason to doubt, must necessarily weaken the bulb, and prevent its flowering the following season, consequently no benefit could be gained by such an experiment. I would suggest to those who wish to flower these bulbs in pots, that after this object is attained, the best plan would be to sink the pot under ground, as the bulb would mature the foliage the better; for the flowering of the Amarylladine tribe depends more on the state of ripeness the leaves attain than almost anything else; their flowering the following season depends wholly on what state of perfection the leaves are brought to; so it is useless to expect perfection unless the foliage be well brought forward, which is not apt to be the case if retained in the pot. The Amaryllis generally does not flourish so well when planted under the soil, which will account for bulbs generally not flowering; but Amaryllis Formosissima is an exception; you must therefore place them about two inches deep under the soil. This bulb is increased by offsets, not by seed, although the pollen is perfect and abundant, a circumstance that appears singular, whether arising from the climate, or what other cause, I cannot say.—This bulb can be purchased for twenty-five cents each, a sum within the reach of every person that has the least pretension for the culture of flowers, even if not in possession of a flower garden.

T. WINTER.

The Blight.

(Concluded.)

III. *Cause of the Blight.*

The Indiana Horticultural Society, early in the summer of 1844, appointed a committee to collect and investigate facts on the Fire-Blight. While serving on this committee, and inquiring in all the pear growing regions, I learned that Reuben Reagan, of Putnam county, Indiana, was in possession of much information, and supposed himself to have discovered the cause of this evil; and to him I am indebted for a first suggestion of the cause. Mr. Reagan has for more than twelve years past suspected that this disease originated in the fall previous to the summer on which it declares itself. During the last winter Mr. Reagan predicted the blight, as will be remembered by some of his acquaintance in Wayne county; and in his pear orchards he marked the trees that would suffer, and pointed to the spot which would be the seat of the disease; and his prognostications were strictly verified. After gathering from him all the information which a limited time would allow, I obtained from Aaron Alldredge, of this place, a nurseryman of great skill, and possessed of careful, cautious habits of observation, much corroborative information; and particularly, a tabular account of the blight for nine years past in his nursery and orchard.

The spring of 1843 opened early, but cold and wet, unti lthe last of May. The summer was both dry and cool, and trees made very little growth of new wood. Toward autumn, however, the drought ceased, copious rains saturated the ground, and warm weather started all trees into vigorous, though late growth. At this time, while we hoped for a long fall, and late winter, on the contrary we were surprised by an early and sudden winter, and with unusual severity at the very beginning. In this region, much corn was ruined, and more damaged; and hundreds of bushels of apples were caught on the trees, and spoiled; one cultivator alone losing five hundred bushels.—Caught in this early winter, what was the condition of fruit trees? They were making rapid growth, every part in a state of excitement, the

wood unripe, the passages of ascent and descent impleted with sap. In this condition, the fluids were suddenly frozen; the growth instantly checked: and the whole tree,from a state of great excitability, was, by one shock, rudely forced into a state of rest. Warm suns, for a time, followed severe nights. What would be the effect of this freezing and sudden thawing upon the fluids and their vessels? I have been able to find so little written upon vegetable morbid anatomy, (probably from the want of access to books,) that I can give but an imperfect account of the derangement produced upon the circulating fluids by congelation. We cannot state the specific changes produced by cold upon the ascending sap, or on the cambium, nor upon the elaborated descending current. There is reason to suppose that the two latter only suffer, and probably only the last. That freezing and thawing decomposes the coloring matter of plants is known; but what other decomposition if any, is effected, I know not. The effect of congelation upon the descending sap of pear and apple trees, is to turn it to a viscid, unctuous state. It assumes a reddish brown color, becomes black by exposure to the air; is poisonous to vegetables, even when applied upon the leaf. Whether in some measure this follows all degrees of congelation, or only under certain conditions, I have no means of knowing.

The effect of freezing and thawing upon the tissues and sap vessels is better known. Congelation is accompanied with expansion; the tender vessels are either burst or lascerated; the excitability of the parts is impaired, or destroyed; the air is expelled from the æriferous cavities, and forced into the passages for fluids; and lastly, the tubes for the conveyance of fluids are obstructed by a thickening of their sides.* The fruit trees in the fall of 1843, were, then, brought into a morbid state—the sap thickened and diseased; the passages lascerated, obstructed, and probably, in many instances, burst.—The sap, elaborated, and now passing down in an injured state, would descend slowly, by reason of its inspissation, the torpidity of the parts, and the injured condition of the vessels. The grosser parts, naturally the most sluggish, would tend to lodge and gradually collect at the junction of fruit spurs, the forks of branches, or wherever the condition of the sap vessels favored a lodgement. In some cases, the passages are wholly obstructed; in others, only in part.

At length, the spring approaches. In early pruning, the cultivator will find in those trees, which will ere long develope blight, that the knife is followed by an unctuous sap, and that the liber is of a greenish yellow color. These will be the first signs, and the practised eye may detect them long before a leaf is put forth.

When the season is advanced sufficiently to excite the tree to action, the sap will, as usual, ascend by the alburnum, which has, probably been but little injured; the leaf puts out, and no outward sign of disease appears; nor will it appear until the leaf prepares the downward current. May, June, and July, are the months when the growth is most rapid, and when the tree requires the most elaborated sap; and in these months, the blight is fully developed.—When the descending fluid reaches the point where, in the previous fall, a total obstruction had taken place, it is as effectually stopped as if the branch were girdled. For, the sap which had lodged there, would, by the winds and sun, be entirely dried. This would not be the case if the sap was good, and the vitality of the wood unimpaired; but where the sap and vessels are both diseased, the sun affects the branch on the tree just as it would if severed and lying on the ground. There will, therefore, be found on the tree, branches with spots where the bark is dead and shrunk away below the level of the surrounding bark; and at these points the current downwards is wholly stopped. Only the *outward* part, however, is dead, while the *alburnum*, or sap-wood, is but partially injured. Through the alburnum, then, the sap from the roots passes up, enters the leaf, and men are astonished to see a branch, seemingly dead in the middle, growing thriftily at its extremity.—No insect-theory can account for this case, yet it is perfectly plain and simple, when we consider that there are two currents of sap, one of which may be destroyed,,—and the other, for a *limited time*, go on. The blight, under this aspect, is nothing but *ringing* or *decortication*, effected by diseased sap, destroying the parts in which it lodges, and then itself drying up. The branch will grow, fruit will set, and frequently become larger and finer flavored than usual.

But in a second class of cases, the downward current comes to a point where the diseased sap had effected only a partial lodgement. The vitality of the neighboring parts was preserved, and the diseased fluids have been undried by wind or sun, and remain more or less inspissated. The descending current meets and takes up more or less of this diseased matter, according to the particular condition of the sap. Wherever the elaborated sap passes, after touching this diseased region, it will carry its poison along with it down the trunk, and by the latteral vessels in toward the pith. We may suppose that a violence, which would destroy the health of the outer parts, would, to some degree, rupture the inner sap-vessels. By this, or by some unknown way, the diseased sap is taken into the inner upward current, and goes into the general circulation. If it be in a diluted state, or in small quantities, languor and decline will be the result; if in large quantities, and concentrated, the branch will die suddenly, and the odor of it will be that of frost-bitten vegetation. All the different degrees of mortality result from the quantity and

* Lindley's Horticulture, 81, 82.

quality of the diseased sap which is taken into circulation. In conclusion, then, where in one class of cases the feculent matter was in the fall so virulent as to destroy the parts where it lodged, and was then dried by exposure to wind and sun, the branch above will live even through the summer, but perish the next winter; and the spring afterwards, standing bare amid green branches, the cultivator may suppose the branch to have blighted that spring, although the cause of death was seated eighteen months before. When in the other class of cases, the diseased sap is less virulent in the fall, but probably growing worse through the spring, a worse blight ensues, and a more sudden mortality.

I will mention some proofs of the truth of this explanation:

1. The two great blight years throughout this region, 1832 and 1844, were preceded by a summer and fall such as I have described. In the autumns of both 1831 and 1843, the orchards were overtaken by a sudden freeze while in a fresh-growing state; and in both cases the consequence was excessive destruction the ensuing spring and summer.

2. In consequence of this diagnosis, it has been found practicable to predict the blight six months before its development. The statement of this fact on paper, may seem a small measure of proof; but it would weigh much with any candid man to be told by an experienced nurseryman, this is such a fall as will make blight; to be taken during the winter into the orchard and told, this tree has been struck at the junction of these branches; that tree is not at all affected; this tree will die entirely the next season; this tree will go first on this side, &c.; and to find, afterwards, the prediction verified.

3. This leads me to state separately the fact, that after such a fall, blighted trees may be ascertained during the process of late winter or early spring pruning. In pruning before the sap begins to rise freely, no sap should follow the knife in a healthy tree. But in trees which have been affected with blight, a sticky, viscid sap exudes from the wound.

4. Trees which ripen their wood and leaves early, are seldom affected. This ought to elicit careful observation; for, if found true, it will be an important element in determining the value of varieties of the pear in the Middle and Western States, where the late and warm autumns render orchards more liable to winter-blight than New England orchards. An Orange Bergamot, grafted upon an Apple stock, had about run out; it made a small and feeble growth, and cast its leaves in the summer of 1843, long before frost. It escaped the blight entirely; while young trees, and of the same kind, (I believe,) standing about it, and growing vigorously till the freeze, perished the next season. I have before me a list of more than fifty varieties, growing in the orchard of Aaron Alldredge, of this place, and their history since 1836; and so far as it can be ascertained, late-growing varieties are the ones in every case subject to blight; and of those which have always escaped, the most part are known to ripen leaf and wood early.

5. Wherever artificial causes have either *produced* or *prevented* a growth so late as to be overtaken by a freeze, blight has, respectively, been *felt* or *avoided*. Out of two hundred pear trees, only four escaped in 1832, in the orchard of Mr. Reagan. These four had, the previous spring, been *transplanted*, and had made little or no growth during summer or fall. If, however, they had recovered themselves during the summer so as to grow in the autumn, transplanting would have had just the other effect; as was the case in a row of pear trees transplanted by Mr. Alldredge, in 1843. They stood still through the summer, and made growth in the fall, were frozen, and in 1844, manifested severe blight. Mr. Alldredge's orchard affords another instructive fact. Having a row of the St. Michael pear (of which any cultivator might have been proud,) standing close by his stable, he was accustomed, in the summer of 1843, to throw out, now and then, manure about them, to force their growth.—Under this stimulus, they were making excessive growth, when winter-struck. Of all his orchard they suffered, the ensuing summer, the most severely. Of twenty-two trees, *twelve* were affected by the blight, and *eight* entirely killed. Of seventeen trees of the Bell pear, eleven suffered, but none were killed. All in this region know the vigorous habit of this tree. Of eight Crassane Bergamot, (a late grower,) five were affected, and two killed. In an orchard of three hundred and twenty-five trees of seventy-nine varieties, one in seven blighted, twenty-five were totally destroyed. Although a minute observation was not made on each tree, yet as a general fact, those which suffered were trees of a full habit, and of a late growth.

6. Mr. White, a nurseryman near Mooresville, Morgan county, Indiana, in an orchard of from one hundred and fifty to two hundred trees, had not a single case of the blight in the year 1844; though all around him its ravages were felt. What were the facts in this case? His orchard is planted on a mound-like piece of ground; is high, of a sandy, gravelly soil; earlier by a week than nursery soils in this county; and in the summer of 1843, his trees grew through the summer; wound up and shed their leaves early in the fall, and during the warm spell made no *second growth*. The orchard, then, that escaped, was one on such a soil as ensured an *early* growth, so that the winter fell upon ripened wood.

7. It may be objected that if the blight *began* in the new and growing wood, it would appear there; whereas the seat of the evil, i. e. the place where the bark is diseased or dead is

lower down and on old wood. Certainly, it should be; for the returning sap falls some ways down before it effects a lodgement.

8. It may be said that *spring frosts* might produce this disease. But in the spring of 1834, in the last of May, after the forest trees were in full leaf, there came frost so severe as to cut every leaf; and to this day the dead tops of the beech attest the power of the frost. But no *blight* occurred that year in orchard, garden or nursery.

9. It may be asked why forest trees do not suffer. To some extent they do. But usually the dense shade preserves the moisture of the soil, and favors an equal growth during the spring and summer; so that the excitability of the tree is spent before autumn, and it is going to rest when frosts strike it.

10. It may be inquired why fall-growing shrubs are not always blighted, since many kinds are invariably caught by the frost in a growing state.

I reply, first, that we are not to say that *every* tree or shrub suffers from cold in the same manner. We assert it of fruit trees because it has been observed; it must be asserted of other trees only when ascertained.

I reply more particularly, that a *mere frost* is not supposed to do the injury. The conditions under which blight is supposed to originate are, a growing state of the tree, a sudden *freeze* and sudden thawing.

We would here add, that many things are yet to be ascertained before this theory can be considered as settled; as, the actual state of the sap after congelation, ascertained by experiment; the condition of sap vessels, as ascertained by dissection: whether the congelation, or the thawing, or both, produce the mischief; whether the character of the season *following* the fall injury, may not materially modify the malignancy of the disease; seasons that are hot, moist and cloudy, propagating the evil; and others dry, and cool, restraining growth and the disease. It is to be hoped that these points will be carefully investigated, not by conjecture, but by scientific processes.

11. We have heard it objected, that, trees grafted in the spring, blight in the graft during the summer. If the *stock* had been affected in the fall, blight would arise from *it;* if the scion had, in common with the tree from which it was cut, been injured, blight must arise from *it.*

Blight is frequently caused in the nursery; and the cultivator who has broughi trees from a distance, and with much expense, has scarcely planted them, before they show blight and die.

12. It is objected, that while only a single branch is at first affected, the evil is imparted to the whole tree; not only to the wood of the last year, but to the old branches. I reply, that if a single branch only should be affected by fall frost, and be so severely affected as to become a repository of much malignant fluid, it might gradually enter the system of the whole tree through the circulation. This fact shows why *cutting* is a partial remedy; every diseased branch removed, removes so much poison; it shows also why cutting from *below* the seat of the disease (as if to fall below the haunt of a supposed insect) is beneficial. The farther the cut is made from that point where the sap has clogged the passages, the less of it will remain to enter the circulation.

13. Trees of great vigor of constitution, in whose system but little poison exists, may succeed after awhile in rejecting the evil, and recover. Where much enters the system, the tree must die; and with a suddenness proportioned to the amount of poison circulated.

14. A rich and *dry* soil would be likely to promote early growth, and the tree would finish its work in time; but a rich and *moist* soil, by forcing the growth, would prepare the tree for blight: so that rich soils may prevent or prepare for the blight, and the difference will be, the difference of the respective soils in producing an early instead of a late growth.

IV. *Remedy.*

So long as the blight was believed to be of insect origin, it appeared totally irremediable.—If the foregoing reasoning be found correct, it will be plain that the scourge can only be occasional; that it may be in a degree prevented; and to some extent remedied where it exists.

1. We should begin by selecting for pear orchards a warm, light, rich, dry and early soil.—This will secure an early growth and ripe wood, before winter sets in.

2. So soon as observation has determined what kinds are naturally early growers and early ripeners of wood, such should be selected; as they will be least likely to come under those conditions in which blight occurs.

3. Wherever orchards are already planted; or where a choice in soils cannot be had, the cultivator may know by the last of August or September, whether a fall growth is to be expected. To prevent it, I suggest immediate *root pruning.* This will benefit the tree, at any rate; and will probably, by immediately restraining growth, prevent blight.

4. Whenever blight has occurred, I know of no remedy but free and early *cutting.* In some cases it will remove all diseased matter; in some, it will alleviate only: but in bad blight, there is neither in this, nor in anything else that I am aware of, any remedy.

There are two additional subjects with which I shall close this paper.

1. This blight is not to be confounded with *winter killing.* In the winter of either 1837 or 1838, in March a deep snow fell (in this region;) and was immediately followed by brilliant sun. Thousands of nursery trees perished in consequence, but without putting out leaves, or lingering. It is a familiar fact to orchardists,

that severe cold, followed by warm suns, produce a bursting of the bark along the trunk; but usually at the surface of the ground.

2. I call the attention of cultivators to the disease of the Peach tree, called "The Yellows." I have not spoken of it as the same disease as the *Blight* in the Pear and Apple, only because I did not wish to embarrass this subject by too many issues. I will only say that it is the opinion of the most intelligent cultivators among us, that the yellows are nothing but the development of the blight according to the peculiar habits of the peach tree. I mention it, that observation may be directed to the facts.

HENRY W. BEECHER.

Ornamental Gardening.

In Colman's late writings on European agriculture, we find the following:

"The cultivation of flowers and shrubs and vines, is a remarkable and prominent feature in the landscape of England; and a circumstance which has given no little gratification to my national pride, has been the profusion of American plants, which are seen in the shrubberies and plantations and pleasure grounds, both public and private. Green-houses and conservatories are almost universal in the country where anything like a garden exists; and the better class of houses are surrounded and adorned with a great variety of flowering shrubs and plants, presenting through the season a charming succession of gay and brilliant ornaments. Even the laborer's humble cottage, too seldom, I am compelled to admit, anything but a picturesque object, will occasionally have its ornamental shrubs adorning its doorway, and the ivy hanging its beautiful tresses over its window, forming as it were a mirror set in a frame of the richest green. The village of Marr, in Yorkshire, not far from Doncaster, and the village of Edensor, in Derbyshire, near Chatsworth, and the village of Lord Brownlow, in Lincolnshire, the best built, and by far the handsomest villages I have yet seen in England, to cottages of an excellent and picturesque construction, add those beautiful rural embellishments of vines and shrubs and flowers, and at first blush compel a reflecting mind to admit the moral influence of such arrangements upon the character and manners of their inhabitants.

"I have said and written a great deal to my countrymen about the cultivation of flowers, ornamental gardening, and rural embellishments; and I would read them a homily on the subject every day of every remaining year of my life, if I thought it would induce them to make this a matter of particular attention and care. When a man asks me, what is the use of shrubs and flowers? my first impulse is always *to look under his hat and see the length of his ears.* I am heartily sick of measuring everything by a standard of mere utility and profit; and as heartily do I pity the man who can see no good in life but in pecuniary gain, or in the mere animal indulgences of eating and drinking."

Winter Fruit.

Increasing attention is paid to the cultivation of fruit in almost every state in the Union, and it will not be long before good fruit in the proper season will be abundant in all our large towns and cities. A writer in the Newark Advertiser makes the following sensible suggestion in relation to the cultivation of winter fruit:—

"The cultivation of winter fruits should be the object of special attention. This has always been exceedingly important; but since the present commendable disuse of beverages derived from fruit, the growing of so great a proportion of summer and very perishable small and uninviting fruits, as has been, and still is usual, opposes a serious obstacle to the prosperity of the industrious farmer. If Providence should, as in the present season, pour abundance into his lap, it can scarcely be called a blessing, for the crop is nearly valueless on account of its perishable nature. Let us then say to the farmer, cultivate chiefly winter fruits, and always of the best kinds. It costs no more to rear and take care of a tree which will produce several barrels of apples or pears that will keep through the winter, and sell readily for a good price, than it does to give room to one that merely cumbers the ground. In the mean time old trees of little or no value now overshadow the land. Head them down next spring, and graft them with the choicest sorts of winter fruit. With respect to the apple this is easy, for the catalogue of good winter apples is large, and may be at pleasure increased. This is not, to so great an extent, the case with pears. Yet there exists in this country a sufficient number of even luscious winter pears for the table to give the inhabitants of New Jersey a new kind for every week in the winter, instead of those which are now generally seen in the market, and which no one ought to venture upon eating without he is sure of finding a dentist around the next corner.

The transactions of the Massachusetts Horticultural Society, established 15 or 20 years ago perhaps, will be found full of encouragement and instruction. That association has caused the introduction and propagation of the best known fruits and flowers, and during the short period of its existence, has advanced the science and practice of horticulture and its arts, more than all the agencies of fifty years, or perhaps a century before: and now, barren Massachusetts (or *Cape Cod* as it is sometimes called) yields a harvest of fruits and flowers, which soils and climes more generous may well envy."

The Flower Garden for January.

In this department, there will be but little to do this month. Should the weather be open, remove roses and ornamental shrubs, at the same time mulch them well to prevent the frost from injuring their roots. It would be advisable to plant no more bulbs in the open ground this season, as the probability is the roots would rot, instead of striking root. Protect your beds of bulbous roots from heavy rains and severe frosts, and your flowers will be the finer in their bloom the coming season. Manure may be strewed over your beds and borders, and in mild weather turn them over to mellow the soil. Dahlias, the last of this month, should be examined, and if mouldy, dried in the sun and repacked.

THE PARLOR.

If attention be paid to your Camellias at this season, by watering and syringing occasionally, it will be a great benefit, and make their buds swell better, and your plants more vigorous. Exotic plants should be watered with caution, and their pots kept clear of decayed leaves, otherwise your plants will get sickly, languish and die. Chrysanthemums should be cut down, if not done last month, and placed out of the way, their stems being of no ornament after flowering. Hyacinths, Tulips, and Crocuses, may still be potted the early part of this month to flower in the house. Hyacinths, in glasses, must be guarded against frost, and kept in the sun during the day. This department being mostly attended to by ladies, the pleasure derived by them will naturally be some inducement to pay strict attention to their flowers. I would caution them against leaving their glasses in the window on a mild evening, for frequently this month the weather will change twenty or thirty degrees in one night, breaking the glasses, disturbing their equanimity, and marring the pleasure anticipated—creating a distaste for flowers; all of which may be avoided with a little trouble. T. WINTER.

Flowers.

It is curious to note how gradually the flowers warm into the rich colors and aromatic breath of summer. First, comes the snow-drop, formed from the snows which give it name—fair, but scentless; then comes the primrose, with its faint, soft hues, and its faint, soft perfume—an allegory of actual existence, where the tenderest and most fragile natures are often those selected to bear the coldest weather, and the most bleak exposure.

Clinton Grape, without pulp, and matures very early.

Fruit.

The Cincinnati Market is likely to have soon, what has long been a desideratum, a bountiful supply, through the season, of the best fruits raised in the country. There is no danger of the market's being overstocked; good fruit is so important, in regard to health and luxury, that the consumption will increase with the supply, if the price is kept reasonably low.

Our friend, John E. Mottier, of Delhi, who is famous for the success of his horticultural operations, and for the decided superiority of the fruit he brings to market, has purchased a new farm in Green, about four and a half miles from the city, which he is stocking with the best varieties of fruit that he can collect, from different parts of the Union. He has already set out, the past month, four hundred peach trees, one hundred cherries, one hundred pears, one hundred apples, and is preparing the ground for a vineyard of ten thousand grape vines, (chiefly Capes and Catawbas,) and for an acre of his Mammoth Seedling Strawberry, in addition to the Pine, Hovey, and other early varieties.

Mr. Mottier is a judicious farmer; has the best dairy stock; manures highly; and keeps up a good rotation of crops. He hired a farm of poor, worn out land, fifteen years since, the soil of which, by pursuing the above course, his neighbors say, has been improved one hundred per cent. in fertility.

There are fine orchards coming on, chiefly of summer fruit, near this city, on the Licking—and of winter fruit, at several places above the city.

A horticultural friend from Lawrenceburgh, suggested, a few days since, that the soil, exposition, and location of General Harrison's farm, at North Bend, is highly favorable for all kinds of summer and winter fruit, which could always be brought to the city in a short time, by river or canal, in good order.—*Cincinnati Atlas.*

Flowers and Birds.

Teach your children in mercy to spare the nests of the harmless little birds, and if you have a heart to be thankful, it will rise up in unison with the little songster's carol, to think your lot is cast in such a pleasant vale of flowers and singing birds. These are some of the many things provided to lighten the toil of labor, and it is only a vitiated taste, acquired from a false system of education, that prevents us from deriving a great deal of happiness from such small accompaniments of the journey of life. And besides the pleasure derived from their melodious and enchanting carollery, they are valuable as destroyers of many of our most troublesome insects.

White Doyènne Pear.